

Claims

[c1] What is claimed is:

1. An electronically controlled trap for trapping small animals comprising:
 - (a) an enclosure having a top, side walls, a base and a partition that divides said enclosure into an accessible front chamber and a restricted rear chamber
 - (b) a pivoting U-shaped bail rotatable up to a set position near said roof and rotatable down to a tripped position near said base vertically centered near and parallel to said partition within said front chamber
 - (c) a U-shaped cocking yoke pivotally movable from a cocked/tripped position to a setting position pivoting around the same axis as said bail, moveable about the exterior of said enclosure, said trap may be emptied and reset easily and safely by moving said cocking yoke thereby avoiding contact with the trapped animal
 - (d) at least one spring with one end coupled to said bail and the other end coupled to said cocking yoke such that said bail is urged to follow the rotation of said cocking yoke
 - (e) a release device that is manually movable to a not released position holding said bail in said set position

- (f) an electronic means of moving said release device to its released position such that all the energy is provided by said trap and none is provided by said small animal thereby releasing said bail to move to its tripped position
- (g) a means of changing the spring tension acting on said bail
- (h) an electronic means of disabling said trap when there is a danger that said trap may harm birds
- (i) an electronic means for sensing when said small animal is in a position for said trap to be effective such that said trap provides all the energy for the sensing and said small animal supplies none of this energy
- (j) an electronic means of sensing that said trap has been tripped
- (k) an electronic means of sending a signal indicating that said trap has tripped

- [c2] The electronically controlled small animal trap of claim 1 further includes a cut out area in the bottom face of said partition forming a short dead end tunnel.
- [c3] The short dead end tunnel of claim 2 further includes at least one light emitting diode on one side of said short dead end tunnel sending a beam of light across the front opening of said short dead end tunnel and at least one phototransistor on the other side of said short dead end tunnel detecting said beam of light, bait is placed within

said short dead end tunnel to attract said small animal, when said small animal places its head inside said short dead end tunnel it will block said light beam, said phototransistor will sense that said light beam is blocked.

- [c4] The electronically controlled small animal trap of claim 1 wherein said means of changing said spring tension acting on said bail consists of changing the position of said cocking yoke, the difference between the position of said cocking yoke and the position of said bail determines said spring tension acting on said bail.
- [c5] The electronically controlled small animal trap of claim 1 further includes a cocking yoke locking pin to lock said cocking yoke in said cocked/tripped position.
- [c6] The electronically controlled small animal trap of claim 1 wherein said release device is pivotally mounted near said partition and close to said roof and is moveable to a retained position with the front end of said release device down and the rear end of said device lever up, is moveable to a released position with said front end of said release device up and said rear end of said release device down and includes a retention pin on said front end of said release device for holding and releasing said bail.

- [c7] The electronically controlled small animal trap of claim 1 wherein said means of changing the position of said release lever from said retained position to said released position, further includes a device selected from a list including a low power solenoid.
- [c8] The electronically controlled small animal trap of claim 1 wherein said means of detecting the position of said small animal to be trapped consists of at least one light emitting diode and at least one phototransistor working together to sense the position of said small animal.
- [c9] The electronically controlled small animal trap of claim 1 wherein a means to disable said trap during daylight hours to prevent harm to birds includes a phototransistor to detect daylight and the circuitry to disable said trap.
- [c10] The electronically controlled small animal trap of claim 1 wherein a means of sending a signal indicating said trap has tripped includes a device selected from a list including piezoelectric transducer and light emitting diode.
- [c11] The electronically controlled small animal trap of claim 1 wherein a means of sensing that said trap has been tripped further includes an infrared light emitting diode and an infrared phototransistor working together to de-

tect the position of said release lever.